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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,810

05/12/2006

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EXAMINER

HU, HENRY S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

05/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,810	Applicant(s) UEDA ET AL.	
	Examiner HENRY S. HU	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE of March 16, 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-3 and 5-8 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. USPTO has received **four** things including: (A) **RCE Request with Response**, (B) **Reconsideration** (after Final), (C) **IDS** (1 page) and (D) **Declaration** (written by Akihiko Ueda) filed on March 16, 2009 and February 17, 2009, which are in response to final office action filed on October 16, 2008. With this RCE, **no claim is further amended, cancelled or added.**

Claims 1-3 and 5-8 with only **one** independent claim (**Claim 1**) are now pending, while non-elected Group II (Claim 6) and Group III (Claims 7 and 8) are still both withdrawn from consideration. An action follows.

Response to Argument

2. Applicant's arguments filed on February 17 and March 16, 2009 have been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: The previous amendment on parent Claim 1 is only to **narrow down** the use of one of many Rf factors as “a linear or branched **fluoroalkyl or fluoroalkenyl group each having 1-6 carbon atoms** (instead of original 1-21 carbon atoms)”. With RCE, no claim is further amended, cancelled or added. **All previous three 103 rejections are withdrawn, while two new 102(b) rejections are applied after new search. Non-Final rejection is thereby applied** for this RCE.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The limitation of parent **Claim 1** in present invention relates to **a fluorine-containing polymer for a masonry treatment**, comprising **two** components including:

(A) ***a fluorine-containing monomer having a formula (I) $R_f-Y-O-C(=O)-CX=CH_2$ with all the three factors X, Y and R_f as specified, and***

(B) a monomer containing a functional group reactive with active hydrogen.

According to previous narrow down, one of many R_f factors is now “a linear or branched fluoroalkyl or fluoroalkenyl group each having 1-6 carbon atoms (instead of original 1-21 carbon atoms)”.

According to its dependent **Claim 2**, said functional group is selected from the group consisting of ***a silane group, a phosphate group, a carboxylate group, a sulfate group and a glycidyl group.***

See other limitation of dependent Claims 2-3 and 5.

5. **Claims 1-3 and 5 are rejected** under 35 U.S.C. 102(b) as being anticipated by **Inukai** et al. (**EP 327,906 A1** or its equivalent **US 5,128,389**) or **Ohmori** et al. (**EP 247,489 A2** or its equivalent **US 5,021,501**).

Parent **Claim 1** relates to **a fluorine-containing polymer (to be useful for a masonry treatment)** comprising **two** components including: (A) a fluorine-containing monomer having a formula (I) $R_f-Y-O-C(=O)-CX=CH_2$, and (B) a monomer containing **a functional group, which is reactive with active hydrogen.** According to its dependent **Claim 2**, the functional group of monomer (B) can be a silane group, a phosphate group, a carboxylate group, a sulfonate group or a glycidyl group. With previous amendment, **Rf** factors is now narrowed down to be **“a linear or branched fluoroalkyl or fluoroalkenyl group each having 1-6 carbon atoms.**

6. Each of **Inukai** and **Ohmori** has individually disclosed a fluorocopolymer, which at least comprising fundamentally the same claimed **two monomers (A), and (B)** so as **to treat the surface of at least some porous substrates** including **masonry** and the like. Accordingly, hard coating with low refractive index is obtained from Inukai's fluoropolymer, while water- and oil-repellent coating is obtained from Ohmori's fluoropolymer. Clearly, both fluorocopolymers are related to **“surface treatment agent”** according to the art. **Open language “comprising” is applied to the monomeric composition of the fluoropolymer** of parent Claim 1. Therefore, each of **Inukai** and **Ohmori** anticipates the current RCE limitation of parent Claim 1.

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7. To be specific, see **Inukai's** formula (1) $\text{CH}_2=\text{C}(\text{R}^1)-\text{C}(\text{C}=\text{O})-\text{O}-\text{X}-\text{R}^2$ (wherein R^1 is fluorine atom, chlorine atom or methyl group; X is an alkylene group, a $-\text{CH}_2\text{CH}_2-$ $\text{N}(\text{R}^1)\text{SO}_2-$ group or a $-\text{CH}_2\text{CH}(\text{OY}^1)-\text{CH}_2-$ group; and R^2 is a fluorinated alkyl group C_{1-20}) as fluorinated monomer reads on the claimed monomers (A) at page 2, line 31 – page 3, line 7; see the claimed crosslinkable (which is reactive with active hydrogen as known in the art) monomer (B) such as alkoxysilyl group-containing monomer at page 2, line 31-33; page 3, line 32-55.

Regarding **Ohmori's** formula (1) $\text{R}_f-\text{Y}-\text{O}-\text{C}(=\text{O})-\text{CX}=\text{CH}_2$ (wherein X is a fluorine atom or $-\text{CFX}^1\text{X}^2$; R_f is a fluorinated alkyl group C_{3-21} ; and Y is an alkylene group, a $-\text{CH}_2\text{CH}_2-\text{N}(\text{R}^1)\text{SO}_2-$ group or a $-\text{CH}_2\text{CH}(\text{OY}^1)-\text{CH}_2-$ group) as fluorinated monomer reads on the claimed monomers (A) at abstract; page 2, line 1-14; see the claimed crosslinkable (which is reactive with active hydrogen as known in the art) monomer (B) such as functional group such as trialkoxy-silyl-containing monomer at page 5, line 8-18.

8. Regarding **Claims 2-3**, the use of alkoxysilyl group-containing monomer by Inukai and the use of trialkoxy-silyl-containing monomer by Ohmori as discussed above read on Claims 2-3.

Regarding **Claim 5**, a fluorine-free alkyl group-containing monomer may be used together with monomers (A) and (B) for copolymerization so as to make fluoropolymers by Inukai and Ohmori. See **Inukai's methyl methacrylate, methacrylic acid and the like** at

page 4, line 15-17, while see **Ohmori's methyl methacrylate and the like** at page 4, line 23 – page 5, line 8; page 5, line 19-22.

9. In summary, **all previous three 103 rejections are withdrawn, while two new 102(b) rejections are applied after new search.** **Non-Final rejection is thereby applied** for this RCE.

Conclusion

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on access to

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the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D. Mulcahy/
Primary Examiner, Art Unit 1796

/Henry S. Hu/
Examiner, Art Unit 1796

May 22, 2009